WHAT IS CLAIMED IS:

1. A fuel cell integrated by laminating one or more single cells in the form of a single unit, said single cell comprising:

an electrolyte membrane;

a fuel electrode catalyst layer disposed on one surface of said electrolyte membrane;

an air electrode catalyst layer disposed on the other surface of said electrolyte membrane;

a first gas diffusion layer disposed on the outer surface of said fuel electrode catalyst layer;

a second gas diffusion layer disposed on the outer surface of said air electrode catalyst layer;

a first separator having one or more gas flow channels for reactant gas, said first separator being in contact with the outer surface of said first gas diffusion layer;

a second separator having one or more gas flow channels for reactant gas, said second separator being in contact with the outer surface of said second diffusion layer;

wherein said single cell is formed by clamping said layer elements to fasten said layer elements all together,

wherein said fuel cell is equipped with means for restraining a reactant gas flowing into adjacent gas flow channels via said first or said second gas diffusion layer in order to prevent the generation of water droplets plugging said gas flow channels.

2. A fuel cell according to Claim 1, wherein the generation of water droplets plugging said gas flow channels is suppressed by setting the pressure loss of

the reactant gas flowing into adjacent gas flow channels via said gas diffusion layer greater than the pressure loss of the reactant gas blowing away the water stayed in the gas flow channels.

3. A fuel cell according to Claim 1, wherein, in said first gas diffusion layer and/or in said second gas diffusion layer, the gas permeability in the direction perpendicular to the gas flow direction and parallel to the surface of said separators is smaller than the gas permeability in the gas flow direction and in the lamination direction of said single cells.

4. A fuel cell according to any one of Claims 1 to 3, wherein said first and second gas diffusion layers include fibrous elements, and wherein the gas flow direction in said gas flow channels is approximately parallel to the fiber direction of said fibrous elements in said first and second gas diffusion layers facing said gas flow channels.

5. A fuel cell according to any one of Claims 1 to 3, wherein said first and second gas diffusion layers include fibrous elements, and wherein the gas flow direction for the gas flow channels possessing 50% or more areas of all the gas flow channels in said separator is arranged approximately parallel to the fiber direction of said fibrous elements in said gas diffusion layers facing said separator.

6. A fuel cell according to any one of Claims 1 to 3, wherein said first and second gas diffusion layers include fibrous elements, and wherein the gas flow direction in said separator is arranged approximately parallel to the fiber direction of 70% or more fibrous elements in said gas diffusion layers facing

said gas flow channel.

7. A fuel cell produced by laminating one or more single cells in the form of a single unit, said single cell comprising:

an electrolyte membrane;

a fuel electrode catalyst layer disposed on one surface of said electrolyte membrane;

an air electrode catalyst layer disposed on the other surface of said electrolyte membrane;

a first gas diffusion layer disposed on the outer surface of said fuel electrode catalyst layer;

a second gas diffusion layer disposed on the outer surface of said air electrode catalyst layer;

a first separator having one or more concave portions and convex portions forming one or more gas flow channels for reactant gas, said first separator being in contact with the outer surface of said first gas diffusion layer;

a second separator having one or more concave portions and convex portions forming one or more gas flow channels for reactant gas, said second separator being in contact with the outer surface of said second diffusion layer;

wherein said fuel cell is formed by clamping said layer elements between said first and second separators to fasten said layer elements all together,

wherein a pair of said first and second separators are fastened under the following condition:

$$D1 \times 0.9 \geq D2$$

wher D1 is the thickness of said gas diffusion layer before said separators are fastened, and D2 is the thickness of said gas diffusion layer after said separators are fastened.